

CLAIMS

I claim:

5 1. A pontoon, said pontoon comprising:

 - a plurality of generally elongated shell segments, each said shell
segment being made out of a generally rigid material, each said shell segment
defining a pair of generally opposed segment longitudinal ends, at least one of
said segment longitudinal ends being a segment connecting end; each said shell
10 segment having a segment peripheral wall surrounding a segment inner volume
and defining at least one end aperture extending into said segment inner volume
from said segment connecting end, said plurality of shell segments connecting to
each other into an end-to-end configuration so as to form a generally elongated
shell, said shell defining a shell longitudinal axis extending through said plurality
15 of shell segments;

 - a filling component positioned within said segment inner volumes, said
filling component being made out of a generally buoyant material, said filling
component being slidably and successively insertable through said at least one
end apertures in a direction generally along said shell longitudinal axis and
20 towards corresponding said opposed segment longitudinal end, the volume of
said filling component being such that the combination of said shell and said
filling component forms a generally buoyant combination.

 2. A pontoon as recited in claim 1, wherein adjacent of said plurality
25 of shell segments connect to each other with a male-female engagement.

3. A pontoon as recited in claim 2, wherein said male-female engagement includes a male segment connecting end connecting to an adjacent female segment connecting end.

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4. A pontoon as recited in claim 3, wherein said male segment connecting end is formed by a longitudinal end portion of said segment peripheral wall having a periphery generally smaller than the remaining longitudinal portion of said segment peripheral wall.

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5. A pontoon as recited in claim 4, wherein said female segment connecting end is an opposed longitudinal end portion of said remaining longitudinal portion of said segment peripheral wall.

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6. A pontoon as recited in claim 5, wherein said male segment connecting end is generally slidably connectable to said adjacent female segment connecting end.

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7. A pontoon as recited in claim 1, further comprising a closing component mounted at least partially over said at least one end aperture of an end one of said shell segments for at least partially closing said at least one end aperture of said end one of said shell segments.

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8. A pontoon as recited in claim 1, wherein said segment peripheral wall includes a base section, a generally opposed supporting section and a pair

of spacing sections extending therebetween in a generally spaced apart relationship relative to each other; said base section defining a base section outer surface, said base section outer surface being provided with at least one longitudinal channel extending substantially and at least partially therealong.

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9. A pontoon as recited in claim 1, wherein said segment peripheral wall includes a base section, a generally opposed supporting section and a pair of spacing sections extending therebetween in a generally spaced apart relationship relative to each other; said supporting section defining at least one linking flange extending laterally therefrom in a direction leading generally adjacent from an adjacent spacing section.

10. A pontoon as recited in claim 9, wherein said spacing sections taper generally towards each other in a direction leading towards said base section.

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11. A pontoon as recited in claim 1, wherein said segment inner volume defines a generally hollow ballast section extending at least partially longitudinally therealong; whereby said ballast section is at least partially fillable with a ballast material.

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12. A pontoon as recited in claim 1, further comprising an end cap, said end cap including a cap wall for generally overriding said at least one end aperture of a longitudinal endmost of said shell segments.

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13. A pontoon as recited in claim 12, wherein said end cap further includes a cap flange extending from said cap wall for attaching said cap wall to said longitudinal endmost of said shell segments.

5 14. A pontoon as recited in claim 12, further comprising a cap valve extending through said cap wall for selectively establishing a fluid communication between said segment inner volumes and the exterior of said shell.

10 15. A pontoon as recited in claim 13, wherein said cap flange is inserted into said segment inner volume between said longitudinal endmost of said shell segments and said filling component.

15 16. A pontoon as recited in claim 1, further comprising a valve extending between one of said segment inner volume and the exterior of said shell for selectively establishing a fluid communication between said segment inner volumes and the exterior of said shell.

20 17. A pontoon as recited in claim 1, further comprising a connecting component connecting adjacent shell segments to one another.

25 18. A pontoon as recited in claim 17, wherein said connecting component defines a connector longitudinal axis, said connecting component having a connector peripheral wall surrounding a connector inner volume extending longitudinally therethrough, said connector inner volume being in fluid communication with said segment inner volumes of adjacent said shell segments,

whereby said filling component is slidably and successively insertable through said connector inner volume and said adjacent segment inner volumes in a direction generally along said connector longitudinal axis and shell longitudinal axis, respectively.

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19. A pontoon as recited in claim 18, wherein said connector peripheral wall is configured and sized to longitudinally slidably fit into said segment inner volume of adjacent said shell segments.

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20. A pontoon as recited in claim 19, wherein said connector peripheral wall has a periphery generally smaller than the periphery of said segment peripheral wall of adjacent said shell segments so as to longitudinally slidably fit thereinto.

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21. A shell for pontoon, said shell comprising:

- a generally elongated shell segment being made out of a generally rigid material, said shell segment defining a shell longitudinal axis, said shell segment having a segment peripheral wall extending between a pair of generally opposed longitudinal segment closing ends and surrounding a shell inner volume, said
20 shell segment being dividable in a direction generally transverse to said shell longitudinal axis into at least two longitudinal sections with a respective end aperture extending into respective said shell inner volume so as to allow said shell inner volumes to be at least partially fillable by a filling component.

22. A shell as recited in claim 21, wherein said shell segment includes a longitudinal throat section located intermediate said segment closing ends, said shell peripheral wall of said throat section having a periphery generally smaller than the periphery of said shell peripheral wall.

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23. A shell as recited in claim 22, wherein said segment peripheral wall of said throat section is configured and sized to be longitudinally and slidably fittable into said shell inner volume of the remaining section of said shell segment.

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24. A shell as recited in claim 23, wherein said throat section extends longitudinally inwardly from one of said longitudinal segment closing ends.

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25. A shell as recited in claim 24, wherein said shell segment defines a first predetermined transversal dividing region at an interface between said throat section and a remaining portion of said shell segment.

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26. A shell as recited in claim 25, wherein said shell segment defines a second predetermined transversal dividing region at an interface between said throat section and said one of said longitudinal segment closing ends.

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27. A shell as recited in claim 21, wherein said segment peripheral wall includes a base section, a generally opposed supporting section and a pair

of spacing sections extending therebetween in a generally spaced apart relationship relative to each other; said base section defining a base section outer surface, said base section outer surface being provided with at least one longitudinal channel extending substantially and at least partially therealong.

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28. A shell as recited in claim 21, wherein said segment peripheral wall includes a base section, a generally opposed supporting section and a pair of spacing sections extending therebetween in a generally spaced apart relationship relative to each other; said supporting section defining at least one
10 linking flange extending laterally therefrom in a direction leading generally adjacent from an adjacent spacing section.

29. A shell as recited in claim 28, wherein said spacing sections taper generally towards each other in a direction leading towards said base
15 section.

30. A shell as recited in claim 21, wherein said shell is manufactured using a rotational molding process.

20 31. A shell as recited in claim 21, wherein at least one of said generally opposed longitudinal segment closing ends has a generally hydrodynamically convex configuration.